



IEC 60350-2

Edition 3.0 2025-05
REDLINE VERSION

INTERNATIONAL STANDARD

**Household electric cooking appliances –
Part 2: Hobs – Methods for measuring performance**

iteh Standards
(<https://standards.iteh.ai>)
Document Preview

[IEC 60350-2:2025](https://standards.iteh.ai/catalog/standards/iec/4ea8b085-8232-48f9-9224-82091383b09e/iec-60350-2-2025)

<https://standards.iteh.ai/catalog/standards/iec/4ea8b085-8232-48f9-9224-82091383b09e/iec-60350-2-2025>



THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2025 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Secretariat
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search -

webstore.iec.ch/advsearchform

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee, ...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

IEC Products & Services Portal - products.iec.ch

Discover our powerful search engine and read freely all the publications previews, graphical symbols and the glossary. With a subscription you will always have access to up to date content tailored to your needs.

Electropedia - www.electropedia.org

The world's leading online dictionary on electrotechnology, containing more than 22 500 terminological entries in English and French, with equivalent terms in 25 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

[IEC 60350-2:2025](https://standards.iteh.ai/catalog/standards/iec/4ea8b085-8232-48f9-9224-82091383b09e/iec-60350-2-2025)

<https://standards.iteh.ai/catalog/standards/iec/4ea8b085-8232-48f9-9224-82091383b09e/iec-60350-2-2025>

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD	5
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 List of measurements	12
4.1 Dimensions and mass	12
4.2 Cooking zones (3.3) and cooking areas	13
4.3 Cleaning	13
5 General conditions for the measurements	13
5.1 Test room	13
5.2 Electricity supply	13
5.3 Instrumentation and measurements	14
5.4 Positioning the appliance	14
5.5 Initial conditions	15
5.6 Cookware	15
5.6.1 Standardized cookware (3.14)	15
5.6.2 Alternative cookware (3.15)	4
6 Dimensions and mass	5
6.1 Overall dimensions	5
6.2 Mass of the appliance	7
6.3 Cooking zones and cooking areas	7
6.3.1 Number of cooking zones (3.3) per hob (3.2)	7
6.3.2 Dimensions of cooking zones (3.3)	7
6.3.3 Dimensions of cooking areas	8
6.4 Level of solid hotplates	9
6.4 Distance between cooking zones (3.3)	9
7 Energy consumption and heating up time	9
7.1 General	9
7.2 Purpose	9
7.3 Determine a cookware set to assess measure a hob (3.2) with cooking zones (3.3)	9
7.4 Positioning the cookware on a cooking zone	10
7.5 Procedure for measuring the energy consumption of a cooking process	11
7.5.1 Preparation of the hob (3.2)	11
7.5.2 Preliminary measurements	12
7.5.3 Measuring the energy consumption - main test	15
7.5.4 Calculation and evaluation	16
7.6 Procedure for measuring the heating up time	19
8 Ability to control (3.11) the temperature of a load	19
8.1 Lower control (3.11) position	19
8.1.1 Purpose	19
8.1.2 Cookware, positioning and ingredients	20
8.1.3 Procedure	20
8.1.4 Assessment	21
8.2 Temperature overshoot of hotplates	21
8.2.1 Purpose	21

8.2.2	Ingredients and cookware.....	21
8.2.3	Procedure.....	21
8.2.4	Assessment.....	21
9	Heat distribution and heat supply.....	22
9.1	Measuring the heat distribution.....	22
9.1.1	Test purpose.....	22
9.1.2	Discs.....	22
9.1.3	Pre-test for determining the setting.....	23
9.1.4	Preparation of the disc for the main test.....	24
9.1.5	Main test.....	24
9.1.6	Assessment.....	25
9.2	Continuous frying.....	29
9.2.1	Purpose.....	29
9.2.2	Specification of the frying pan.....	30
9.2.3	Recipe and amounts.....	31
9.2.4	Pre-test.....	31
9.2.5	Main test.....	32
9.2.6	Assessment.....	33
10	Heat performance of cooking zones (3.3).....	34
10.1	Purpose.....	34
10.2	Procedure.....	34
11	Smallest detected diameter for induction cooking zones (3.8).....	35
11.1	Purpose.....	35
11.2	Procedure.....	36
12	Power measurement of low power modes.....	37
12.1	Purpose and combination of appliances.....	37
12.2	Measurement.....	37
12.2.1	Principles.....	37
12.2.2	Determination of power consumption in off mode (3.20).....	38
12.2.3	Determination of power consumption in standby mode (3.21).....	39
12.2.4	Determination of consumption in standby mode in condition of networked standby (3.22).....	39
13	Spillage capacity of hobs.....
	Annex A (normative) Further requirements for measuring the energy consumption and heating up time for cooking areas.....	40
A.1	General.....	40
A.2	Hob (3.2) with cooking area.....	40
A.2.1	General.....	40
A.2.2	Cooking area without limitative marking (3.9).....	40
A.2.3	Hob (3.2) with cooking area with limitative marking (3.10).....	41
A.2.4	Hob (3.2) with cooking zones (3.3) and cooking areas.....	42
A.3	Positioning on a cooking area.....	42
A.3.1	General.....	42
A.3.2	Positioning on a cooking area without limitative markings (3.9).....	42
A.3.3	Positioning on a cooking area with limitative markings (3.10).....	43
	Annex B (informative) Aids for measuring the energy consumption according to Clause 7.....	47
B.1	Fixing the temperature measurement instrument to the lid - Example.....	47
B.2	Marking the lowest possible simmering power setting.....	47

Annex C (informative) Examples how to select and position the cookware for measurements according to Clause 7 and Annex A.....	49
C.1 Example 1 - cooking zones	49
C.2 Example 2 - cooking zones (3.3) combined with cooking area with limitative markings (3.10).....	51
C.3 Example 3 - cooking area with limitative markings (3.10) > 3 controls (3.11) with the area of control (3.11) in front	55
C.4 Example 4 - cooking area with limitative markings (3.10) > 3 controls (3.11) with the area of control (3.11) at the side	58
Annex D (normative) Shade chart
Annex E (informative) Data and calculation sheet: energy consumption of a cooking process (see Clause 7 and Annex A)
Annex F D (informative) Addresses of suppliers.....	65
D.1 General.....	65
D.2 Disc material (C45) for measuring the smallest detected diameter	65
D.3 Stainless steel for bottom material of the standardized cookware (3.14)	65
D.4 Cookware for measuring the energy consumption and heating up time	65
D.5 Disc for measuring the heat distribution	65
F.6 Lamp for digital measurement systems
F.7 Digital measurement system
F.8 Testcharts for checking the resolution of the imaging system.....
Annex G E (informative) Example for assessing the lower control (3.11) position.....	67
E.1 General.....	67
E.2 Criteria.....	67
Annex H F (informative) Pre-test for determining the simmering setting regarding the measurement of energy consumption.....	68
F.1 Purpose	68
F.2 Procedure to determine an adequate simmering setting	68
Annex G (normative) Low power mode measurements.....	69
Bibliography.....	72
Figure 1 – Standardized cookware (3.14).....	2
Figure 2 – Dimensions of appliances	6
Figure 3 – Dimensions of built-in hobs (3.2).....	7
Figure 4 – Device for checking the level of solid hotplates
Figure 4 – Overshoot measurement	12
Figure 5 – Energy consumption measurement process for a cooking process	16
Figure 6 – Diametral lines	29
Figure 7 – Disc to determine the smallest detected diameter	36
Figure A.1 – Layout for a hob (3.2) with cooking area without limitative marking (3.9) - Example	40
Figure A.2 – Layouts for a hob (3.2) with a cooking area with limitative marking (3.10) - Examples.....	41
Figure A.3 – Drawing layer.....	43
Figure A.4 – Position a cookware set on a cooking area with limitative markings (3.10) ≤ 3 controls (3.11) - Example	44
Figure A.5 – Position a cookware set on a cooking area with limitative markings (3.10) > 3 controls (3.11) - Example	46

Figure B.1 – Position of the temperature measurement instrument.....	47
Figure B.2 – Polar coordinate paper - Example	48
Figure C.1 – Example 1: tubular hotplates (3.6), solid hotplates (3.5), radiant cooking zone (3.7) or induction cooking zone (3.8)	49
Figure C.2 – Example 1: selecting and positioning of cookware	51
Figure C.3 – Example 2: induction (3.8) or radiant cooking zones (3.7) combined with a cooking area with limitative markings (3.10).....	52
Figure C.4 – Example 2: selecting and positioning of cookware	54
Figure C.5 – Example 3: cooking area with limitative markings (3.10) > 3 controls (3.11) with the area of the control (3.11) in front	55
Figure C.6 – Example 3: procedure how to shift the cookware into the correct position - Step 1	56
Figure C.7 – Example 3: Procedure how to shift the cookware into the correct position - Step 2.....	57
Figure C.8 – Example 4: cooking area with limitative markings (3.10) > 3 controls (3.11) with the area of the control (3.11) at the side	58
Figure C.9 – Example 4: procedure how to shift the cookware into the correct position - Step 1	59
Figure C.10 – Example 4: procedure how to shift the cookware into the correct position - Step 2.....	60
iTeh Standards https://standards.itih.af Document Preview	
Table 1 – Instruments	14
Table 2 – Measurements.....	14
Table 3 – Sizes of standardized cookware (3.14) and water amounts.....	17
Table 4 – Criteria for selecting the cookware set regarding cooking zones (3.3)	10
Table 5 – Amount of oil.....	20
Table 6 – Specifications for discs used for measuring the heat distribution	22
Table 7 – maximum time t_{\max} for each size of disc	27
Table 8 – Ingredients	31
Table 9 – Quantity of batter per pancake	31
Table 10 – Example for the assessment of pancakes.....	34
Table 11 – Quantities for heat performance test.....	34
Table 12 – Frying times for potato chips	35
Table A.1 – Criteria for the cookware set for measuring cooking areas without limitative marking	41
Table A.2 – Criteria for the cookware set for measuring cooking areas with limitative marking (3.10)	42
Table D.1 – Classification of shade numbers regarding R_y.....
Table D.2 – Examples for the shade charts regarding L^*, R_y and the specification of the limiting samples H_{limit} and H_{lower}
Table G.1 – Step by step instruction for measuring low-power modes	70

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Household electric cooking appliances -
Part 2: Hobs - Methods for measuring performance**

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.

3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.

4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.

5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.

6) All users should ensure that they have the latest edition of this publication.

7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.

8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.

9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 60350-2:2017+AMD1:2021 CSV. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.